

As Applicants noted in their previous response, MPEP §2131 specifies that a given claim is anticipated “only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference,” citing Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Moreover, MPEP §2131 indicates that the cited reference must show the “identical invention . . . in as complete detail as is contained in the . . . claim,” citing Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). For the reasons identified below, Applicants submit that the Examiner has failed to establish anticipation of at least independent claims 1, 12, 25 and 26 by the Kasslin reference.

Independent claim 1 is directed to a method of controlling a terminal in a communication system. The method includes the following steps, which are denoted as (a) and (b) herein for ease of discussion:

- (a) generating a command symbol representative of a plurality of commands in accordance with a terminal protocol supported by a switch of the system; and
- (b) transmitting the command symbol to a terminal having a valid command space which is less than a full command space of the terminal protocol, wherein the terminal decodes the symbol and executes the corresponding plurality of commands.

The following portion of the specification at page 1, lines 11-23, with emphasis supplied, indicates that in conventional arrangements, use of a complex multi-octet terminal protocol to control a system terminal presents a number of significant problems:

Communication system switches frequently deploy multifunction voice or voice-and-data terminals which generally require a complex multi-octet terminal protocol to drive the terminal interface and to control transport services. Such a multi-octet protocol is typically field oriented, and may include, e.g., a header field, a command pointer field, a command data field interpreted according to the contents of the command pointer, and an integrity check field. Each field is usually defined as a collection of one or more bits, and

certain bits or collections of bits are dedicated to certain functions. This creates fixed relationships between bits and command interpretations. In addition, the deskset terminal design is such that a large number of bits are assigned or reserved for numerous feature keys and feature indicator controls. When such a system is upgraded to support wireless terminals, use of the existing wired terminal protocol is desirable from a switch software point of view, since re-use of the protocol is generally a low-cost implementation. Unfortunately, this conventional approach requires excessive bandwidth, and fails to optimize the control protocol for the wireless voice terminal.

The present invention as set forth in independent claim 1 solves these problems of the prior art by providing a symbol-based approach which allows a system terminal to operate using a valid command space which is less than a full command space of the terminal protocol. More specifically, in step (a) a command symbol is generated that is representative of a plurality of commands in accordance with a terminal protocol supported by a switch of the system, and in step (b), the command symbol is transmitted to a terminal having a valid command space which is less than a full command space of the terminal protocol. The terminal decodes the symbol and executes the corresponding plurality of commands, thereby conserving bandwidth and providing other advantages.

These advantages in an illustrative embodiment are more particularly described as follows at page 3, lines 6-14, of the specification, with emphasis supplied:

The above-described illustrative embodiment of the invention significantly reduces the command field associated with supporting the operation of a wireless terminal using an existing wired terminal protocol. This results in a proportional bandwidth consumption reduction when communicating over wireless communication channels, thereby preserving this scarce resource. The full functionality of the system, as expressed by the wired terminal protocol, is made available to the wireless terminal to the extent implementable in that terminal. In addition, there is no need to subject the command symbols to bitwise

encryption, since their field mapping conventions in accordance with the wired terminal protocol are eliminated during the symbol generation process of the invention.

The present invention as claimed thus provides significant advantages over the prior art. As will be described below, the claimed arrangements, and their associated advantages, are not taught or suggested by the Kasslin reference.

The Examiner argues that each of claims 1, 2, 4-8, 12, 13, 15-19 and 23-26 is anticipated by the Kasslin reference. Applicants respectfully disagree.

With regard to independent claim 1, the Examiner asserts that the generation of a DAB packet representative of a plurality of ATM cells in FIG. 4A of Kasslin meets the limitations of step (a) above. Applicants believe that the Examiner is misinterpreting the Kasslin reference on this point. Step (a) calls for generating a command symbol representative of a plurality of commands in accordance with a terminal protocol. There is no particular command symbol in Kasslin that is representative of a plurality of commands in FIG. 4A. Instead, if one were to assume for purposes of argument that the DAB packet of Kasslin comprises a plurality of commands, it is simply the commands themselves that are assembled into the packet. There is no separate generation of a command symbol representative of the plurality of commands.

On page 4, second paragraph, of the final Office Action, the Examiner asserts that “it is assumed that Applicant agrees that the data in [the] DAB packet . . . can be read on the claimed command symbol.” Applicants believe that the Examiner has misconstrued their argument. Applicants argue that a plurality of commands *per se*, such as commands in a DAB packet, cannot read on the claimed command symbol which is representative of a plurality of commands. Both the claim and the specification make it abundantly clear that the claimed command symbol is distinct from the plurality of commands which it represents. To argue otherwise, as the Examiner is attempting to do, in effect gives no patentable weight to the term “command symbol” in the claim. For example, the claim includes the step of “generating a command symbol representative of a plurality of commands.” If a plurality of commands *per se* could be construed as a command symbol, as argued by the Examiner, there would be absolutely no need whatsoever for the generating step. Moreover, the term “command symbol” as described in the specification is generated from a

plurality of commands, as an entity separate from those commands, and thus cannot be read on a plurality of commands *per se*. See the specification at, for example, page 6, lines 13-17, which provides as follows, with emphasis supplied:

A mechanism is defined for creating the command symbols, e.g., on the wireless port card in the serving switch, and for decoding and executing them in the served wireless terminal. Note that in the process, individual bits lose their assigned identity in the wired terminal protocol to that of the generated command symbol, and that overall bit utilization is reduced while performing equivalent command functions.

Applicants note that the foregoing quotation from the specification is intended to illustrate for the benefit of the Examiner one possible command symbol arrangement falling within the scope of claim 1. Applicants are not arguing that the particular elements of this portion of the specification constitute actual claim limitations.

The Examiner further argues that a mobile terminal in the mobile radio network of FIG. 6 in Kasslin has a valid command space which is less than a full command space of the terminal protocol associated with the plurality of commands, and that this terminal decodes a command symbol and executes a corresponding plurality of commands represented by the command symbol, as required in step (b) of claim 1. However, there is no teaching or suggestion within Kasslin to the effect that any particular mobile terminal in the mobile radio network of FIG. 6 has a valid command space which is less than the full command space associated with the information in the DAB packet of FIG. 4A. To the contrary, the reference suggests that the command space of the mobile terminal will be exactly the same as the command space associated with the DAB packet of FIG. 4A, since it will generally be desirable in the Kasslin system for the mobile terminal to be able to utilize any command that may be assembled into the DAB packet of FIG. 4A.

On page 4, third paragraph, of the final Office Action, the Examiner states that “the information on one ATM cell are [sic] assembled into several DAB packets, thus the command space in one DAB packet is less than the command space in one ATM cell.” Applicants submit that this statement misconstrues the notion of command space as described and claimed in the present

application. The term “full command space” as used in the context of claim 1 does not refer to the particular commands within any given transmitted packet or cell, as argued by the Examiner, but instead refers to the total set of commands supported by a given terminal protocol. An illustrative example of a full command space of a terminal protocol is shown in FIG. 2 of the drawings, and described in the corresponding text at page 6, line 20 to page 7, line 6 of the specification. An illustrative example of a terminal with “a valid command space which is less than a full command space of the terminal protocol” is the wireless terminal shown in FIG. 3 of the drawings, which can be fully controlled using the reduced command space shown in FIG. 4 of the drawings. The terms “full command space” and “valid command space which is less than a full command space of the terminal protocol” as used in claim 1 and interpreted in light of the specification thus clearly refer to the full set of commands associated with a given terminal protocol and a subset of those commands, respectively. The argument advanced by the Examiner fails to accord proper meaning to these claim terms.

Applicants noted in their previous response that the Kasslin system, by failing to meet the limitations of steps (a) and (b) of claim 1, does not provide the previously-described significant advantages associated with the claimed invention, such as a reduction in the amount of system bandwidth consumed by commands directed from a switch to a system terminal.

On page 5, first full paragraph, of the final Office Action, the Examiner responds to this point by stating that “a reduction in the amount of system bandwidth consumed by commands directed from a switch to a system terminal” is not recited in the claim at issue. Applicants do not argue that the quoted language is recited in the claim. Applicants instead argue that the quoted language represents an important advantage that results from steps (a) and (b) of claim 1 in an illustrative embodiment of the invention such as that described in conjunction with FIGS. 1 through 5 of the drawings. The fact that the Kasslin system clearly fails to provide this advantage constitutes strong evidence that Kasslin does not anticipate steps (a) and (b) of claim 1.

In summary, there are limitations in independent claim 1 that are clearly not taught or suggested by the Kasslin reference. The §102(a) rejection of claim 1 is therefore believed to be improper and should be withdrawn.

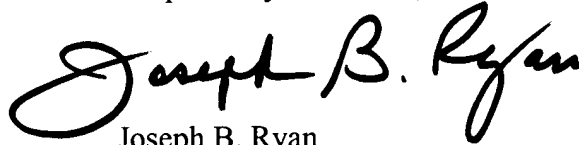
Independent claims 12, 25 and 26 include limitations similar to those of claim 1, and are believed allowable for substantially the same reasons that claim 1 is believed allowable.

Dependent claims 2, 4-8, 13, 15-19, 23 and 24 are believed allowable for at least the reasons identified above with regard to their respective independent claims. Moreover, one or more of these claims is believed to define additional patentable subject matter over the Kasslin reference.

For at least the above reasons, Applicants respectfully submit that claims 1-26 are patentable over Kasslin. Accordingly, withdrawal of the §102(a) rejection is respectfully requested.

As indicated above, a Notice of Appeal is submitted concurrently herewith.

Respectfully submitted,

A handwritten signature in black ink that reads "Joseph B. Ryan". The signature is written in a cursive style with a large, looped initial "J".

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Enclosure(s): Notice of Appeal